

SYSTEM AND METHOD FOR PROTECTING EYE SAFETY DURING OPERATION OF
A FIBER OPTIC TRANSCEIVER

ABSTRACT OF THE DISCLOSURE

A single-chip integrated circuit, sometimes called a controller, controls operation of a transceiver having a laser transmitter and a photodiode receiver. The controller includes memory for storing information related to the transceiver, and analog to digital conversion circuitry for receiving a plurality of analog signals from the laser transmitter and photodiode receiver, converting the received analog signals into digital values, and storing the digital values in predefined locations within the memory. Comparison logic compares one or more of these digital values with predetermined setpoints, generates flag values based on the comparisons, and stores the flag values in predefined locations within the memory. Control circuitry in the controller shuts off the laser transmitter in response to comparisons of signals with predetermined setpoints that indicate potential eye safety hazards.